Obituary

MASANGU SHABANGI
(1965-2014)

On March 13, 2014, Dr. Masangu Shabangi, Associate Professor in the Department of Chemistry at Southern Illinois University Edwardsville (SIUE), passed away after a pulmonary fibrosis that had been affecting him for some time.

Dr. Shabangi was born on October 28, 1965 in the Democratic Republic of Congo, former Zaire. He obtained his B.S. in Chemistry from Asbury College in Kentucky and his doctorate in Analytical Chemistry from the University of Toledo, Ohio. He became a faculty member in the Department of Chemistry at SIUE in 2000, reaching the rank of associate professor in 2006.

Dr. Shabangi had a wide range of research interests that included, but were not limited to, electrochemistry, and chemo and biosensors. He worked on what are known as water-soluble vitamins, basically the different types of vitamin B and vitamin C. During his career he published a number of papers in major scientific journals and received numerous grants in support of his research (see Appendix I). He taught a number of courses, including General Chemistry, Nursing Chemistry and Advanced Instrumental Analysis, the latter at the graduate level. He received several teaching awards and was a member of several scientific societies.

Dr. Shabangi and his two children. Picture by his wife, Lea.

His great passion was in promoting the participation of minority students in the natural sciences. As an African he inspired others, including African Americans from East St. Louis, to pursue careers in the sciences. He always told them that there are no shortcuts in life; that if they wanted to succeed they needed to apply themselves with discipline and setting high standards. To learn more about Dr. Shabangi, visit http://www.siue.edu/artsandsciences/CTarticle106.pdf and listen and watch him in a radio interview he gave about his life and career at https://vimeo.com/62391956

I had the great opportunity to know Masangu Shabangi not only professionally, but also personally. He and I were tennis partners, another activity he pursued despite his chronic respiratory illness. He was a mild-manner individual, generous, and very kind with everybody.

He leaves behind his wife Lea Shabangi and two children, Alexandre and Timothy.

Aldemaro Romero Jr.
Dean, College of Arts and Sciences
Southern Illinois University Edwardsville

APPENDIX I

Dr. Masangu Shabangi
Grants, Publications, and Presentations

FUNDED GRANT PROPOSALS:

- SIUE-FUR (2006): Electrochemical Titrtation of ThPP with Pyruvate Decarboxylase ($10,028)
- SIUE-EUE (2006): Semi-Quantitative Phase Analysis by X-ray Powder Diffraction ((PI: Masangu Shabangi, Co-PI: Eric Voss, $6,025)
- NSF (2004), Collaborative Project Gemini XRD: Powder X-ray Diffraction in Undergraduate Chemistry Courses (PI Eric Voss, Co-PIs Masangu Shabangi, Eric Malina, Michael Shaw, and Susan Wiediger, $104,817 Funded)
- SIUE-Graduate School, Grant writing workshop (Received a laptop PC, 2004).
- SIUE-EUE (2004): Video Production for an online Video Lab Manual (PI: Eric Voss, Co-PI: Masangu Shabangi, $11,083, Funded)
- SIUE-EUE (2004): Filming Chemical Procedures for an Online Video Lab Manual (PI: Masangu Shabangi, Co-PI: Eric Voss, $9,803, Funded)
- SIUE-FUR (2004): The Electrochemical Investigation of the Catalytic Properties of Pyruvate Decarboxylase, Pyruvate Dehydrogenase and their Coenzymes (PI: Masangu Shabangi, $3,062, Funded)
- SIUE-Graduate Students (2004): Isolation and Characterization of Thiamin-Dependent Enzymes (**Ben Bomer**, $500, Funded)
- SIUE-Equipment Competition (2003): The Purchase of a Screen Printer ($3,350 Funded).
- SIUE-SRF (2002): The electrosynthesis of molecular wires in zeolites" ($6,000)
- HECA (2002): Illinois Board of Higher Education: "Academic Activities Required to Prepare Underrepresented students in Science" ($60,000). (P. I. Masangu Shabangi), this grant is mostly for service, but it provides other support needed for research
- SIUE-SRF (2001): The development of fiber optic based biosensors for the detection of vitamin B_1" ($6,000)
- SIUE-Graduate School (2001): Research Equipment Competition: "The use and development of microelectrodes for the electrochemical investigation of biological analytes" ($5,591)
- HECA (2001): Illinois Board of Higher Education: "Building blocks for the recruitment, preparation and retention of underrepresented students in science" ($40,000). (P. I. Masangu Shabangi), this grant is mostly for service, but it provides other support needed for research

PUBLICATIONS:

- The electrochemical investigation of the catalytic power of pyruvate decarboxylase and its coenzyme. Patrick Bell, Kathryn Hoyt, Masangu Shabangi, *Bioelectrochemistry* 68 (**2005**) 176 - 179.
- Separation of thiamin and its phosphate esters by capillary zone electrophoresis and its application to the analysis of water-soluble vitamins. Masangu Shabangi, Jeffrey A. Sutton, J*ournal of Pharmaceutical and Biomedical Analysis* 38 (**2005**) 66-71.
- Activation of the electrochemical properties of thiamin and its phosphate esters in acidic solutions. Jeffrey Sutton, Masangu Shabangi. *Journal of Electroanalytical Chemistry* 571 (**2004**) 283-287.
- "Reactions of SmI_2 with Alkyl Halides and Ketones: Inner Sphere vs. Outer Sphere Electron Transfer in Reactions of Sm(II) Reductants" Miller. S. R.; Sealy, M. J.; Shabangi, M.; Kuhlman, M.; Fuch, R. J.; Flowers, R. A. II; *J. Am. Chem. Soc.,* **2000**, *122*, 7718-7722.

- "Mechanism of Reduction of Primary Alkyl Radicals by SmI_2-HMPA" Shabangi, M.; Kuhlman, L. M.; Flowers, R. A. II; *Org*. *Lett*. **1999**, *1*, 13, 2133-2135.
- "The Influence of Cosolvent and Additives on the Reactivity of Samarium Diiodide" Flowers, R.A., II; Shabangi, M.; Caracoti, A.; Sealy, J.M. *Recent Res*. *Devel*. *Organic Chem*., **1999**, *3*, 141-149.
- "The Effect of Cosolvent on the Reducing Power of SmI_2 in Tetrahydrofuran" Shabangi, M.; Fuchs, J.; Sealy, J.; Flowers, R. A.,II *Tetrahedron*. *Lett*. **1998**, *39*, 4429-4432.
- "The Reducing Power of SmI_2" *European Chemistry Chronicle Vol*. *3*, 1, **1998**, 27-28.
- "The Effect of Lithium Bromide and Lithium Chloride on the Reactivity of SmI_2 in THF" Fuchs, J. R.; Mitchell, M. L.; Shabangi, M.; Flowers, R. A.,II *Tetrahedron*. *Lett*. **1997**, *38*, 8157-8158.
- "Electrochemical Investigation of the Reducing Power of SmI_2 and the Effect of HMPA Cosolvent" Shabangi, M.; Flowers, R. A.,II *Tetrahedron*. *Lett*. **1997**, *38*, 1137-1140.

PRESENTATIONS:

- The electrochemical study of glucose oxidase and its coenzyme FAD (**James Blazier, Senior Assignment, April 2011**).
- The electrochemical and electrophoretic investigation of the effect of urea on pyruvade decarboxylase (**Ryan Hicks, Thesis Defense, August 2009**).
- The Electrochemistry of Urea Induced Dimers of Pyruvate Decarboxylase (**Ellise Mullins Probst's lecture 2009**).
- Electrochemical investigation on the effect of applied potential on the reaction catalyzed by pyruvate decarboxylase (**Tejendra Patel, 2008 Probst Lecture**).
- Electrophoretic Investigation of Pyruvate decarboxylase (**Department seminar by Ryan Hicks, March 05, 2008 and Probst Lecture**).
- The Electrochemical Investigation of Pyruvate Decarboxylase and Its Coenzyme Thiamin Pyrophosphate. (**Patrick Bell, Thesis Defense, August 2006**).
- Electrochemical Investigation of Thiazole. (**Senior Assignment presentation by Ryan Hicks, November 15, 2006**).
- Evidence of Thiamin Pyrophosphate as Redox Center in Pyruvate Decarboxylase. (by **Patrick Bell**, **Pittsburgh Conference, Orlando, FL. March 14, 2006**).
- Electrochemical Investigation of the Catalytic Power of Pyruvate Decarboxylase and its Coenzyme Thiamin Pyrophosphate (**Award Winner Poster by Patrick Bell, Probst Lecture 2005**).
- Electrochemical Study of Alpha-Ketoglutarate Dehydrogenase and Pyruvate Dehydrogenase Complexes (**Senior Assignment Poster by Kathryn Hoyt, Probst Lecture 2005**).
- Determination of the Presence and Structure of a Thiamin Derivative Using Several Instrumental Methods (**Senior Assignment Poster by Chris Korves, Probst Lecture 2005).**
- The effect of diffusion of analyte on bare carbon and Y-zeolite modified screen printed electrodes using cyclic voltametry and electrochemical impedance spectroscopy methods (**Senior Assignment Oral Presentation by Brandon Hatfield, Spring 2005**).
- The electrochemical investigation of thiamin and its phosphate esters in acidic solutions. St Louis University, St. Louis, MO, October 29, 2004 (**by Masangu Shabangi**, **Invited**).
- Nanoparticles and their applications (by Isil Yasa, Departmental seminar, September 22, 2004).
- Isolation and Characterization of Thiamin-dependent Enzymes (**by Ben Bomer, Departmental seminar, October 13, 2004**).

- The Effect of Alcohol on the Absorption of Thiamin (**by Cara Johnson, Senior Assignment, Probst Lecture 2004**).
- The Electrochemical and Capillary Zone Electrophoretic Analysis of Thiamin and its Phosphate Esters (**Thesis Defense by Jeff Sutton, July 30, 2003**).
- Linda Hartman gave a poster presentation at the 2003 Probst Lecture entitled "Capillary Electrophoresis vs. High Performance Liquid Chromatography and their Applications in the Determination of Vitamin B_1" **(Senior Assignment, March 31, 2003, Bouman Prize Winner** Poster, Probst Lecture 2003).
- Analysis of Thiamin in a Biological Sample (**Senior Assignment by Hope Hall, November 5, 2003**).
- The use of Zeolite-Modified Electrodes to Study the Diffusion Properties of Analytes (**by Steve Bryant, SIUE Senior Assignment, 2002**).
- Capillary Electrophoresis Analysis of Thiamin Derivatives as an Alternative Method to HPLC based Thiochrome (**Thiamine Conference, May 18, 2002, Newark, NJ**).
- The Electrochemical Characterization of Thiamin Pyrophosphate and other Thiamin Derivatives (**Poster, Pittcon, March 2001, New Orleans, LA**).
- The Electrochemical Characterization of Vitamin B_1 as a potential Technique for its determination (**Illinois State Academy of Science, April 20, Macomb, IL**).
- The Electrochemical Analysis of Thiamin Pyrophosphate and other thiamin Derivatives (**Poster by Jeff Sutton at the 221st ACS National Meeting, San Diego, CA**).
- Capillary Electrophoresis Analysis of Thiamin Derivatives (**Award Winner Poster by Jeff Sutton, Probst Lecture 2002**).
- Optimization of Experimental Conditions for the Separation of Thiamin Derivatives Using HPLC (**by Christa Willaredt, SIUE Senior Assignment, 2001**).
- Capillary Electrophoresis Analysis of Thiamin Derivatives as an Alternative Method to HPLC based Thiochrome (**Thiamine Conference, May 18, 2002, Newark, NJ**).
- Electrochemical Investigation of the Effect of Complexing Cosolvents on the Redox Potential of SmI_2. (**Pittcon. March 97, Atlanta, GA**).
- Fine Tuning the Redox Potential of Samarium(II) iodide in THF. (**Pittcon. March 98, New Orleans, LA**).